

A NEW SPECIES OF THE GENUS KUWANINA FROM CHINA (HEMIPTERA, COCCOIDEA, ERIOCOCCIDAE)

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Abstract A new species of genus *Kuwanina*, *K. beula* sp. nov., collected on *Betula ablo-sinensis* from Henan Province of China, is described and illustrated. A key to species of the world is provided. Type specimens are deposited in the Insect Collection, Beijing Forestry University.

Key words Hemiptera, Eriococcidae, *Kuwanina*, new species, China.

The genus *Kuwanina* is erected by Cockerell with *Sphaerococcus parvus* Maskell as type species (Fernald, 1903). Its taxonomic status is uncertain. Some authors placed it in the family Pseudococcidae (Morrison & Morrison, 1922; Tang, 1992), others accepted it as a member of the family Eriococcidae (Hoy, 1963; Williams, 1985; Miller & Gimpel, 2000; Wu, 2003; Henderson, 2007), Kosztarab (1968) considered it to be in a separate family Cryptococcidae with genus *Cryptococcus*. Based on morphology of mouthparts, Koteja (1974) considered this genus may be related to genus *Cryptococcus*, but may form a distinct family in the Acanthococcidae (= Eriococcidae) group. The genus here regarded as a normal component of the family Eriococcidae.

Diagnosis. 1) Anal lobe absent; 2) legs absent or the metathoracic legs replaced by pore bearing flaps; 3) antennae reduced to 3 or 4 segments and 4) absence of macroducts.

Kuwanina is similar to *Cryptococcus* in lacking legs, but differ the latter in absence of macroducts (Williams, 1985); or in: 1) all legs represented by vestigial patches; 2) invaginated 5-locular disc pores present; 3) dorsal abdominal segments heavily sclerotised with intersegmental furrows (Henderson, 2007). Because Henderson's diagnosis don't accord with the type species *K. parva*, William's definition adopted here, and we placed the new species in genus *Kuwanina*.

Kuwanina now includes three species: *K. parva* (Maskell), *K. obscurata* (Maskell) and *K. kiwiana* Henderson. The first species is distributed in China (Wu, 2003), Japan (Maskell, 1897; Kawai, 1980), South Korea (Paik, 1978), and recorded from United Kingdom (Hoy, 1963); the other two species are found from Australia and New Zealand respectively.

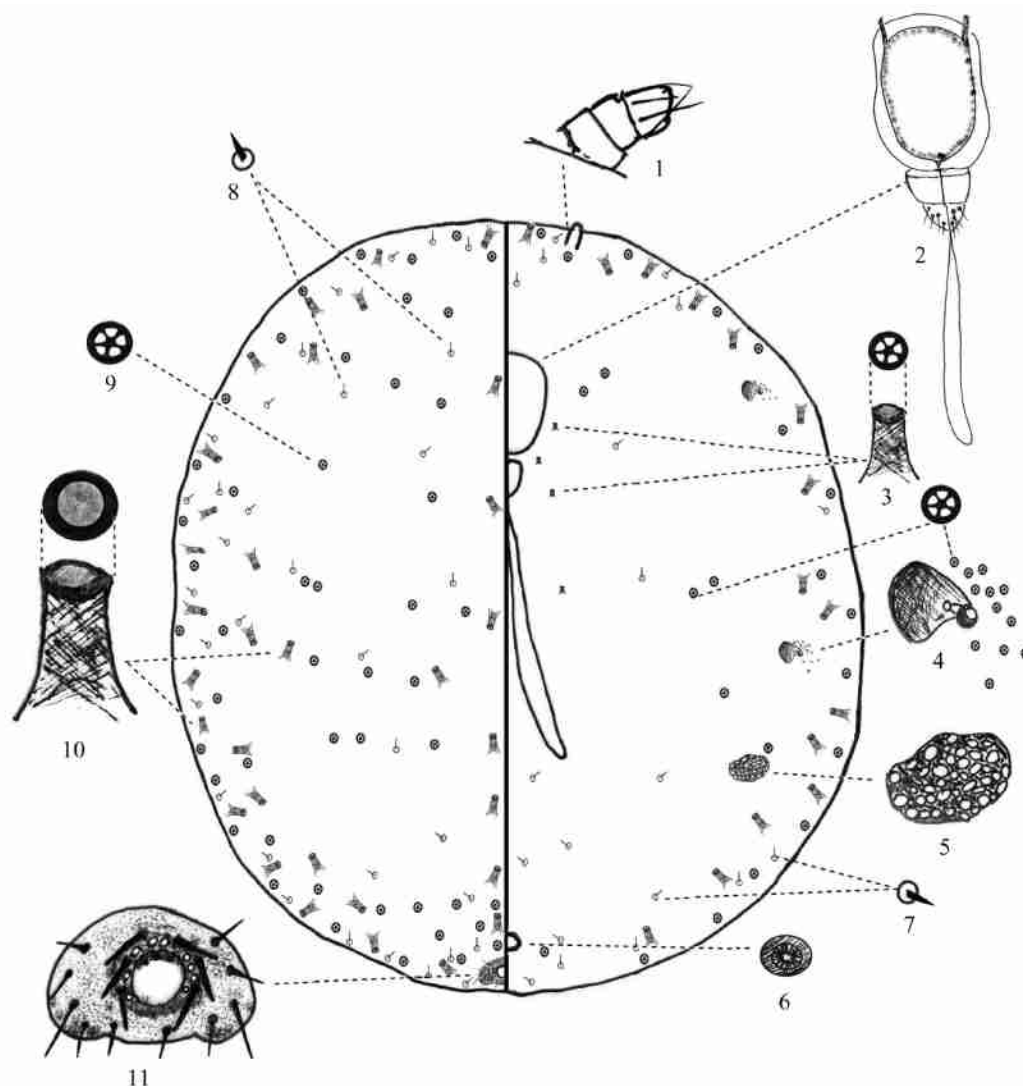
In this paper, a new species collected from Henan Province, China on *Betula ablo-sinensis* Burkill is reported, the type specimens are deposited in the Insects Collection, Beijing Forestry University.

Key to *Kuwanina* species (adult female)

1. Metathoracic legs replaced by a half shaped, pore bearing flap 2
Metathoracic legs represented by a flat pore plate or vestigial leg flap with few pores 3
2. Invaginations on abdominal segments not containing 5-locular disc pores; anal ring without setae *K. obscurata* (Maskell)
Invaginated 5-locular pores on each dorsal abdominal segment; anal ring with 6 setae *K. parva* (Maskell)
3. Pro and mesothoracic legs absent completely; dorsum with invaginated disc pores *K. beula* sp. nov.
Pro and mesothoracic legs with vestige; dorsum without invaginated disc pores *K. kiwiana* Henderson

Kuwanina beula sp. nov. (Fig. 1-11)

In life, adult female hemispherical or spherical, pink (but dead body pale yellow), covered with white cottony secretion of fine waxy threads, living in crevices of bark on main trunk of the host. On slide, body of adult female circular-oval, 0.76-0.87 mm long, anal lobe absent; antenna stub-like, 3-segmented, apical segment with 4 small setae; labium broad, 2-segmented, 0.05-0.06 mm long, 0.05-0.06 mm wide, clypeolabral shield nearly rectangular, 0.10-0.11 mm long, 0.08-0.09 mm wide, the ratio of length of clypeolabral shield to length of labium 2; fore and mid-legs absent, each hind leg reduced to an transverse oval pore plate, 0.04-0.05 mm long, 0.03 mm wide; spiracles surrounded by a sclerotized plate, each anterior spiracle with 7-9, posterior one with 9-12 quinquelocular pores on surface near its atrium; anal ring almost circular, with 9 pores and 6 thick setae, each 13-15 μm long; anal ring surrounded by 10 thick setae, of which 8 setae each 8-9 μm long; 2 setae each 10-15 μm long; anal ring and surrounded setae all in a sclerotized plate; invaginated quinquelocular pores, 4 μm in diameter, only 4 pairs, present near labium; quinquelocular pores, 4 μm in diameter, distributed in both surfaces except median area of venter, densely grouped in atrium of spiracles; invaginated disc pores as large invaginated quinquelocular pores in *Cryptococcus ulmi*, 7.5-10.0 μm in diameter at top terminal end and up to 17.5 μm long, about 100 in



Figs 1-11. Adult female of *Kurumina betulae* sp. nov. 1. Antenna. 2. Mouthpart. 3. Invaginated quinquelocular pore. 4. Posterior spiracles and nearby. 5. Pore plate. 6. Vulva. 7. Conical seta of venter. 8. Conical seta of dorsum. 9. Quinquelocular pore. 10. Invaginated disc pore. 11. Anal ring and nearby.

number, present on margins of body and midline of dorsum; tubular ducts absents; body setae very small, conical, 3 μ m long, distributed on both surfaces, more on margin. Vulva distinct, circular.

Holotype ♀, Mt. Baiyun, Songxian County (34.08°N, 112.05°E), Henan Province of China, on trunk of *Betula abrolsinensis* Burkill, collected by WU Sarr An and LIU Jin, 15 Aug. 2008. Paratypes 19 ♀ ♀, same data as holotype.

Etymology. This new species is named after its host.

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中国隙毡蚧属一新种 (半翅目, 蚧总科, 毡蚧科)

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摘 要 记述采自我国河南省嵩县白云山红桦 *Betula abrosinensis* 上的隙毡蚧属 1 新种: 红桦隙毡蚧 *Kuwanina betula* sp. nov.。同时给出了该属分种检索表。模式标本保存在北京林业大学昆虫标本室。

红桦隙毡蚧, 新种 *Kuwanina betula* **sp. nov.** (图 1~ 11)
雌成虫活体近球形, 粉红色, 被有白色蜡丝。在玻片上, 雌成虫体近圆形, 长 0.76~ 0.87 mm, 尾瓣不明显。触角短锥状, 3 节。胸气门 2 对, 前气门口各有 7~ 9 个五格腺, 后气门口各有 9~ 12 个五格腺。前、中足全缺, 后足退化成 1 横椭圆形孔板。肛环近圆形, 具有 9 个环孔和 6 根环

毛, 周围还有 10 根粗刚毛。肛环和这些粗刚毛位于 1 硬化片上。内陷五格腺仅 4 对, 在口器侧、下方; 五格腺除气门口密集成群外, 分布腹面中区以外的其他体面; 内陷盘状孔约 100 枚, 分布在体缘区和体背中线上。管状腺缺。阴门圆形。
新种与新西兰种 *K. kiwiana* Henderson, 2007 相近, 后足均退化成扁平状孔板。但新种前足和中足全缺, 体面分布有内陷盘状孔; 而后种前足和中足留有痕迹, 内陷盘状孔缺。
正模 1♀, 副模 19♀, 河南省嵩县白云山, 红桦树干裂缝内, 2008 08 15, 武三安和刘锦采。

关键词 半翅目, 毡蚧科, 隙毡蚧属, 新种, 中国.
中图分类号 Q969.35